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| 10/821,635 | 04/09/2004 | Donald J. Harrod | 087801-9307-01 | 9027 |

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EXAMINER

AU, SCOTT D

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| ART UNIT | PAPER NUMBER |
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2612

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,635

Applicant(s)

HARROD ET AL.

Examiner

Scott Au

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 30-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 30-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12202004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The application of Harrod et al. for an "Ignition apparatus and method" filed April 9, 2004 has been examined.

Claims 1-28 and 30-89 are pending.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "the present invention", etc.

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claim 29 is missing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15, 17-28, 30-38, 40-63, 65-85 and 87-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siedentop et al. (US# 6,329,909) in view of Knoll et al. (US# 4,980,680).

Referring to claims 1, 8-10, Knoll et al. disclose a modular ignition assembly for a vehicle having at least one door and at least one system operable by a key, the modular ignition assembly comprising (col. 5 lines 60-67): a housing and a key reader (i.e. consisted of 204 antenna and resonant circuit 205, Figure 2) located at least partially within the housing, the key reader comprising an antenna (204) (i.e. antenna coil); an RFID receiver (200) (i.e. inductive interface for modulating and demodulating the signal) coupled to the antenna (204) (i.e. antenna coil) and adapted to receive RFID signals from the key via the antenna, the RFID signals comprising a code used for authorizing operation of at least one system of the vehicle (col. 6 line 45 to col. 7 line 24); a processor (203) (i.e. encryption unit) coupled to the key reader to receive signals from the key reader responsive to RFID signals received by the RFID receiver (col. 6 line 45 to col. 7 line 24); and an RKE receiver (260) (i.e. receiver) located within

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the housing and adapted to receive RKE signals transmitted to the modular ignition assembly to unlock at least one door of the vehicle (col. 6 lines 25-44; see Figure 2). Siedentop et al. is silent on teaching wherein the housing, key reader, antenna, and RFID receiver comprise an assembly configured for mounting in a vehicle as a single integral unit.

In the same field of endeavor of vehicle operating system, Knoll et al. disclose wherein the housing (18) (i.e. housing) and operating devices comprise an assembly configured for mounting in a vehicle as a single integral unit (col. 4 lines 4-21; see Figure 2).

One ordinary skill in the art understands that the housing and operating devices comprise an assembly configured for mounting in a vehicle as a single integral unit is desirable in the vehicle operating system of Siedentop et al. because Siedentop et al. suggest the receiving unit 20 located in the vehicle comprises of integrated circuit (i.e. see Figure 2) is function to communicate with the portable transponder and key for controlling vehicle units (col. 5 line 57 to col. 6 line 44) and Knoll et al. suggest a theft resistant security system for a motor vehicle comprising of printed circuit board (22). The circuit has components function as a receiver with key/transponder devices (col. 4 lines 5-20 and 57-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the circuit has components function as a receiver with key/transponder devices of Knoll et al. in the vehicle system of Siedentop et al. with the motivation for doing so would reduce the cost and space of making the product.

Referring to claim 2, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose wherein the antenna is coupled to the RKE receiver to receive RKE signals (col. 6 lines 25-30; see Figure 2).

Referring to claim 3, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose wherein the antenna is a first antenna, the modular ignition assembly further comprising a second antenna coupled to the RKE receiver to receive RKE signals from a remote source (col. 6 lines 25-30 and 50-56; see Figure 2).

Referring to claim 4, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose wherein the RKE receiver is adapted to receive RKE signals transmitted to the modular ignition assembly from a fob (col. 3 line 66 to col. 4 line 4 and col. 6 lines 35-44).

Referring to claim 5, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, it is inherent that Siedentop et al. disclose wherein the key reader, antenna, and processor are located at least partially within the housing (i.e. also see Figure 2).

Referring to claim 6, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 5, it is obvious, according to Figure 2, Siedentop et al. disclose wherein the key reader, antenna, and processor are located on a common circuit board.

Referring to claim 7, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 5, it is obvious, according to Figure 2, Siedentop et al. disclose wherein the key reader, antenna, and processor are located within a common electronics enclosure of the vehicle access module.

Referring to claim 11, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, it is inherent that Siedentop et al. disclose the antenna is at least partially located in a wall of the housing (i.e. see Figure 2).

Referring to claim 12, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, it is conventional in the art and obvious that Knoll et al. disclose further comprising a lock cylinder located at least partially within the housing and shaped to removably receive a part of the key therein.

Referring to claim 13, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, it is conventional in the art and is obvious that Knoll et al. disclose

wherein the lock cylinder has a plurality of tumblers releasably engageable with a coded surface of the key.

Referring to claim 14, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose wherein the RFID receiver is part of an RFID transceiver coupled to the antenna and configured for two-way communication with a receiver of the key (col. 6 lines 45-55).

Referring to claim 15, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose wherein the RKE receiver is part of an RKE transceiver, and communicates with a source of the RKE signals (col. 6 lines 25-55; see Figure 2).

Referring to claim 17, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose further comprising a remote starter circuit located at least partially within the housing and adapted to receive at least one wireless signal representative of a command to start the vehicle (col. 6 lines 45-67).

Referring to claim 18, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose further comprising a window control circuit located at least partially within the housing and adapted to receive at least one

signal representative of a command to move at least one vehicle window (col. 6 lines 1-5).

Referring to claim 19, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, it is conventional in the art and is obvious that Siedentop et al. in view of Knoll et al. disclose further comprising: an ignition switch; and a lock located at least partially within the housing and actuatable to prevent the ignition switch from being placed in at least one state.

Referring to claim 20, Siedentop et al. in view of Knoll et al. disclose the ignition assembly of claim 1, Siedentop et al. disclose further comprising a steering column lock having a lock bolt received at least partially within the housing in a position of the lock bolt (col. 13 lines 1-2).

Referring to claims 21, 27-28, 44, and 69, Siedentop et al. in view of Knoll et al. disclose the assembly in claim 1. Claims 21, 27-28, 44, and 69 are equivalent to that of claim 1 addressed above, incorporated herein. Therefore, claims 21, 27-28, 44, and 69 are rejected for the same reasons given with respect to claim 1.

Referring to claims 22-23, Siedentop et al. in view of Knoll et al. disclose the method of claim 21, claims 22-23 are equivalent to that of claim 5 addressed above,

incorporated herein. Therefore, claims 22-23 are rejected for same reasons given with respected to claim 5.

Referring to claims 24-25, Sientop et al. in view of Knoll et al. disclose the method of claim 21, claims 24-25 are equivalent to that of claim 2 addressed above, incorporated herein. Therefore, claims 24-25 are rejected for same reasons given with respected to claim 2.

Referring to claim 26, Sientop et al. in view of Knoll et al. disclose the method of claim 21, claim 26 is equivalent to that of claim 4 addressed above, incorporated herein. Therefore, claim 26 is rejected for same reasons given with respected to claim 4.

Referring to claims 30-38 and 40-43, Sientop et al. in view of Knoll et al. disclose the method of claim 21, claims 30-38 and 40-43 are equivalent to that of claims 7-15 and 16-20 addressed above, incorporated herein. Therefore, claims 30-38 and 40-43 are rejected for same reasons given with respected to claims 7-15 and 16-20.

Referring to claims 45-49, Sientop et al. in view of Knoll et al. disclose the assembly of claim 44, Sientop et al. disclose wherein the antenna, RFID receiver, processor, and RKE receiver are mounted upon the circuit board (col. 6 lines 25-67; see Figure 2).

Referring to claims 50-63 and 65-68, Siedentop et al. in view of Knoll et al. disclose the assembly of claim 44, claims 50-63 and 65-68 are equivalent to that of claims 2-15 and 17-20 addressed above, incorporated herein. Therefore, claims 50-63 and 65-68 are rejected for same reasons given with respected to claims 2-15 and 17-20.

Referring to claims 70-85 and 87-89, Siedentop et al. in view of Knoll et al. disclose the assembly of claim 69, claims 70-85 and 87-89 are equivalent to that of claims 2-15 and 17-20 addressed above, incorporated herein. Therefore, claims 70-85 and 87-89 are rejected for same reasons given with respected to claims 2-15 and 17-20.

Claims 16, 39, 64 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siedentop et al. (US# 6,329,909) in view of Knoll et al. (US# 4,980,680) as applied to claims 1 and 21 above, and further in view of Lin (US# 6,259,362).

Referring to claim 16, Siedentop et al. in view of Knoll et al. disclose the assembly of claim 1. However, Siedentop et al. in view of Knoll et al. did not explicitly disclose a tire pressure monitor circuit located at least partially within the housing and adapted to receive signals representative of tire pressure of at least one vehicle tire.

In the same field of endeavor of vehicle operating system, Lin discloses a tire pressure monitor circuit located at least partially within the housing and adapted to receive signals representative of tire pressure of at least one vehicle tire (col. 2 line 66 to col. 3 line 7; see Figure 1).

One ordinary skill in the art understands that tire pressure monitor of Lin is desirable in the vehicle system of Siedentop et al. in view of Knoll et al. because Siedentop et al. teach the receiver (20) controls the operating device of the vehicle (col. 6 lines 25-67) and Lin teaches the tire pressure monitor 20 connects to the controller 22 (col. 2 line 66 to col. 3 line 7; see Figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the tire pressure monitor connects to the receiver (20) of Siedentop et al. in view of Knoll et al. with the motivation for doing so would allow the safety of driving the vehicle.

Referring to claims 39, 64 and 86, Siedentop et al. in view of Knoll et al. disclose the method and assembly of claims 21, 44, and 69, claims 39,64 and 86 are equivalent to that of claim 16 addressed above, incorporated herein. Therefore, claims 39,64 and 86 are rejected for same reasons given with respected to claim 16.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kokubu et al. (US# 5,838,254) disclose the transmission-reception time correction system.

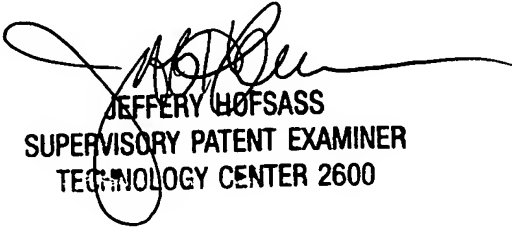
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached at (571) 272-2981. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-272-1817.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au

SA
4/6/04


JEFFERY HOFSSASS
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